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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2016-0117; Notice 2]

General Motors, LLC, Denial of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Denial of petition.

SUMMARY: General Motors, LLC (GM) has determined that certain model year (MY) 2016-2017 Cadillac CT6 motor vehicles do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and Associated Equipment*. GM filed a noncompliance report dated October 26, 2016. GM also petitioned NHTSA on November 18, 2016, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety.

FOR FURTHER INFORMATION CONTACT: Leroy Angeles, Office of Vehicle Safety Compliance, NHTSA, telephone (202) 366-5304, facsimile (202) 366-5930.

SUPPLEMENTARY INFORMATION:

I. Overview: GM has determined that certain MY 2016-2017 Cadillac CT6 motor vehicles do not fully comply with paragraph S7.8.13 of FMVSS No. 108, *Lamps, Reflective Devices, and Associated Equipment* (49 CFR 571.108). GM filed a noncompliance report dated October 26, 2016, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports.* GM subsequently petitioned NHTSA on November 18, 2016, pursuant to 49 U.S.C. 30118(d) and 30120(h) and 49 CFR part 556, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety.

Notice of receipt of the petition was published on April 11, 2017, in the **Federal Register** (82 FR 17518), with a 30-day public comment period. One comment was received. To view the

petition, all supporting documents, and any comments, log onto the Federal Docket Management System (FDMS) website at: https://www.regulations.gov/. Then follow the online search instructions to locate docket number "NHTSA-2016-0117."

II. Vehicles Involved: Approximately 12,475 MY 2016-2017 Cadillac CT6 motor vehicles manufactured between September 4, 2015 and October 18, 2016 (the subject vehicles) are potentially involved.

III. Noncompliance: GM explains that the noncompliance is that the software in the subject vehicles' parking lamp's electronic control unit (ECU) was programmed incorrectly, causing the ECU to misinterpret the signals from the vehicle's body control module (BCM). This results in a higher than expected light output that may exceed the maximum values permitted in paragraph S7.8.13 of FMVSS No. 108. Specifically, the nine failed test points exceeded the maximum allowed value by 2.3% to 74.8%. Eight of the nine failed test points exceeded the maximum allowed value by 25% or more.

IV. Rule Requirements: Paragraph S7.8.13 of FMVSS No. 108, titled "Photometry" includes the requirements relevant to this petition: Each parking lamp must be designed to conform to the photometry requirements of Table XIV of paragraph S7.8.13, when tested according to the procedure of paragraph S14.2.1. Table XIV specifies various minimum and maximum photometric intensity requirements for parking lamps at specified test points.

V. Summary of GM's Petition:

GM describes the subject noncompliance and contends that the noncompliance is inconsequential as it relates to motor vehicle safety.

In support of its petition, GM offers the following reasoning:

a) **The subject vehicles' parking lamp-headlamp combination does not exceed the maximum permitted glare values for headlamps specified in FMVSS No. 108:**

GM states that NHTSA's August 2014 denial of Mercedes-Benz USA's petition for parking lamps that exceeded maximum photometric values, focused on a concern that the parking lamps could cause glare to oncoming drivers (79 FR 50733).

The subject vehicles will expose oncoming drivers to the combined photometric output of the parking lamps and headlamps. GM claims that, when considering glare in real-world application, the critical issue is not the photometric output value of the parking lamp alone, but the performance of the parking lamp in conjunction with the headlamps. GM asserts that most appropriate way to assess this combined effect is to measure the parking lamp-headlamp combination at the traditional headlamp glare points (points above the horizon in the photometric beam pattern that limit light output in the path of oncoming drivers).

GM states that when two samples of the subject vehicles' parking lamp-headlamp combinations were evaluated in the laboratory against recognized glare points, the output fell below, or within, the acceptable value of headlamp glare points specified in FMVSS No. 108.

According to GM, it is possible for a vehicle to incorporate parking lamps and headlamps whose outputs are near, or at the maximum allowed values while remaining compliant. For headlamps, that output would be at or near the maximum specified photometric values, and for parking lamps that output would be at or near 125 candela (cd) at all test points above the horizon. According to GM, a parking lamp with this output value in close proximity to the headlamp at or near maximum output could create combined output with a glare value exceeding the maximum allowable headlamp photometric glare values by 125 cd. GM asserts that the combination would still be compliant, because the headlamp's glare measurement falls within the permitted values for the headlamp alone, and the parking lamp values correspond to the permitted values for parking lamps.

However, GM states that the parking lamp-headlamp combination in the subject vehicles are below the prescribed glare values for a compliant headlamp and well below the value of the theoretical combined parking lamp-headlamp output.

GM argues that the photometric output of the subject vehicles' parking lamps will not cause a glare that presents an unreasonable risk to the safety of oncoming drivers.

b) **GM's claim that the noncompliance has no impact on turn signal performance:** GM recognizes previous statements by NHTSA that a parking lamp that exceeds the maximum permitted photometric values could mask the turn signal and thereby impair the turn signal performance (*See* 79 FR 50733). GM argues that because the parking lamps in the subject vehicles are optically combined with the turn signals (i.e., when the turn signal is activated, the parking lamp is extinguished on the side of the active turn signal), the parking lamp does not bear on and cannot impair the performance of an activated turn signal.

c) **GM's belief that the noncompliance will be addressed in the subject vehicles with a service update bulletin:** GM stated it its petition that it will issue Service Update Bulletin 16078 to address the noncompliance condition in each of the subject vehicles at their next dealership visit or service appointment. Cadillac CT6 owners are provided, free of charge, Cadillac Premium Care Service for three years or 36,000 miles covering routine maintenance including: oil changes, tire rotation, air filter replacement and multi-point vehicle inspection. The subject vehicles will also invariably enter dealerships for other reasons. GM argues that most of the subject vehicles will be corrected during their regular warranty period. The Service Update Bulletin will be issued to dealers once sufficient service parts become available.

GM concludes by again contending that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification

of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

In a letter dated February 13, 2017, subsequent to receipt of GM's petition, GM provided the following additional information pertaining to photometric testing of the subject parking lamps:

a) GM states that the photometric testing of the subject park function was conducted by HELLA KGaA Hueck & Co., the supplier of the lamp, at the Hella lab. The parking lamp and headlamp were mounted in design position relative to each other on a goniometer. The park function and the lower beam were energized simultaneously.[1] (In GM's letter, it provided a table evaluating the headlamp glare values in CT6 headlamp-parking lamp combinations.)

b) To verify that the results of the Hella testing correlate to on-vehicle performance, GM tested the CT6 parking lamps in GM's full vehicle dark room. In this test, GM mounted a photometer 10 meters from each headlamp on approximately the optical axis (the optical center of the beam pattern, where the horizontal and vertical axes of the beam pattern cross). All other lamps were covered except the parking lamp on one side of the vehicle. The vehicle was started, and the parking lamps were energized. The lux output of the lamp was measured and then converted into candela. This process was repeated for the parking lamp on the other side of the vehicle. The values were similar and verified a correlation with the Hella lab data on the goniometer.

[1] To energize the park function on the Cadillac CT6, power and ground are required along with an input signal that duplicates the signal from the vehicle instructing the lamp to illuminate at the Park lamp intensity. This is a Pulse Width Modulation (PWM) signal with a certain frequency and duty cycle. In the Hella lab, that PWM signal was duplicated using a specially built signal generator consisting of a standard PWM Signal Generator and a 47 nF capacitor. The park lamp was energized, using the PWM simulator, to duplicate the subject condition photometry. To energize the lower beam function on the Cadillac CT6, only power and ground is required at its design voltage.

The full petition and all supporting documents submitted by GM can be viewed by logging onto the FDMS website at https://www.regulations.gov/ and following the online search instructions to locate docket number "NHTSA-2016-0117."

VI. Public Comments: One comment was received by an anonymous source, which stated the following: "This letter is written in resistance to the General Motors petition for inconsequential noncompliance that appeared in the Federal Register on April 11. It was Docket NHTSA-2016-0117; Notice 1. You need to consider this request to be moot. In their request, General Motors admits to another noncompliance that must be corrected on the cars affected by the park lamp brightness. General Motors admits that the park lamp is turned off when the turn signal lamp is used. This is a noncompliance because the parking lamp is required to be on and steady burning when the headlights are on. They can fix the park lamp brightness problem when they do the recall to make sure the park lamps stay on when the turn signal lamps are on."

VII. NHTSA's Analysis: The burden of establishing the inconsequentiality of a failure to comply with a *performance requirement* in a standard—as opposed to a *labeling requirement with no performance implications*—is more substantial and difficult to meet. Accordingly, the Agency has not found many such noncompliances inconsequential.[2] Potential performance failures of safety-critical equipment, like seat belts or air bags, are rarely deemed inconsequential.

In determining inconsequentiality of a noncompliance, NHTSA focuses on the safety risk to individuals who experience the type of event against which the recall would otherwise protect.[3] In general, NHTSA does not consider the absence of complaints or injuries as evidence

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[2] *Cf. Gen. Motors Corporation; Ruling on Petition for Determination of Inconsequential Noncompliance*, 69 FR 19897, 19899 (Apr. 14, 2004) (citing prior cases where noncompliance was expected to be imperceptible, or nearly so, to vehicle occupants or approaching drivers).

[3] *See*, *e.g.*, *Gen. Motors, LLC; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 35355 (June 12, 2013) (finding noncompliance had no effect on occupant safety because it had no effect on the proper operation of the occupant classification system and the correct deployment of an air bag); *Osram Sylvania Prods. Inc.; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 46000 (July 30, 2013) (finding occupant using noncompliant light source would not be exposed to significantly greater risk than occupant using similar compliant light source).

that the issue is inconsequential to safety. The absence of complaints does not mean vehicle occupants have not experienced a safety issue, nor does it mean that there will not be safety issues in the future.[4]

Arguments that only a small number of vehicles or items of motor vehicle equipment are affected also do not justify granting of an inconsequentiality petition.[5] Similarly, mere assertions that only a small percentage of vehicles or items of equipment are likely to actually exhibit a noncompliance are unpersuasive. The percentage of potential occupants that could be adversely affected by a noncompliance is not relevant to whether the noncompliance poses an inconsequential risk to safety. Rather, NHTSA focuses on the consequence to an occupant who is exposed to the consequence of that noncompliance.[6]

NHTSA has reviewed GM's petition, all supplemental information, and the anonymous comment; and has made the decision to deny GM's petition for the following reasons:

GM argues that the noncompliance is inconsequential because the subject vehicles' parking lamp-headlamp combination does not exceed the maximum permitted glare values for headlamps specified in FMVSS No. 108**.** While NHTSA agrees that the parking lamp-headlamp combination does not appear to exceed test points representing the vicinity of an oncoming driver's eyellipse (e.g., 1U - 1.5L-L; 0.5U - 1.5L-L; 1.5U - 1R- R; 0.5 U - 1R-3R; 0.5 U - 1R-3R), it is noteworthy that glare points are not distinctly defined in FMVSS No. 108. Based on the data provided by GM, 8 out of 19 test points for the subject parking lamp exceeded the

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[4] *See Morgan 3 Wheeler Limited; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 21663, 21666 (Apr. 12, 2016); *see also United States v. Gen. Motors Corp.*, 565 F.2d 754, 759 (D.C. Cir. 1977) (finding defect poses an unreasonable risk when it "results in hazards as potentially dangerous as sudden engine fire, and where there is no dispute that at least some such hazards, in this case fires, can definitely be expected to occur in the future").

[5] *See Mercedes-Benz, U.S.A., L.L.C.; Denial of Application for Decision of Inconsequential Noncompliance,* 66 FR 38342 (July 23, 2001) (rejecting argument that noncompliance was inconsequential because of the small number of vehicles affected); *Aston Martin Lagonda Ltd.; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 41370 (June 24, 2016) (noting that situations involving individuals trapped in motor vehicles—while infrequent—are consequential to safety); *Morgan 3 Wheeler Ltd.; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 21663, 21664 (Apr. 12, 2016) (rejecting argument that petition should be granted because the vehicle was produced in very low numbers and likely to be operated on a limited basis).

[6] *See Gen. Motors Corp.; Ruling on Petition for Determination of Inconsequential Noncompliance*, 69 FR 19897, 19900 (Apr. 14, 2004); *Cosco Inc.; Denial of Application for Decision of Inconsequential Noncompliance*, 64 FR 29408, 29409 (June 1, 1999).

FMVSS No. 108 maximum allowed value of 125 cd, seven of which exceeded the maximum allowed values by 38% to 113%. As such, these lamps will be noticeably brighter than a compliant lamp and can potentially be distracting to other drivers.[7]

Further, it does not appear that a comprehensive set of data was provided by GM. While GM provided data for combined lower beam and parking lamp photometry, GM provided no data pertaining exclusively to the lower beam or the turn signal photometry. In addition, GM only provided select test points for lower beam photometry combined with the parking lamps.

It is important to note that paragraph S7.1.1.12 of FMVSS No. 108 specifies the ratio requirements between the front turn signal lamps and the parking lamps/clearance lamps. This establishes the requirement that turn signal lamps have three to five times (dependent on the test point) the luminous intensity of the parking lamps when turn signal lamps are combined with parking lamps. If the turn signal lamps are not sufficiently bright enough to be discernable from the parking lamp, then other drivers may not be able to clearly identify the vehicles intent to turn, which poses an increased risk to motor vehicle safety.

While GM argues that extinguishing the parking lamp on the side of the vehicle with the active turn signal prevents impairment of the performance of the activated turn signal, NHTSA does not find this compelling because extinguishing the parking lamp violates the steady burning requirement of FMVSS No. 108. *See* 49 CFR 571.108, Table 1-a (requiring that the parking lamp "be activated when the headlamps are activated in a steady burning state"). In the event that the turn signal lamp fails to activate and the parking lamp is still extinguished, this will reduce the visibility of the vehicle, thus, increasing the risk to motor vehicle safety.

Per the activation requirements for parking lamps, as specified in Table 1-a of FMVSS No. 108, NHTSA agrees with the public comment submitted which states that the parking lamp

[7] GM argues in its petition that glare from the parking lamp does not present an unreasonable risk to the safety of oncoming drivers however that it not the standard by which NHTSA makes determinations of inconsequential noncompliance.

is required to be on, be steady burning when the headlights are activated, and should not be deactivated when the turn signal lamp is used.

GM has offered to issue a service bulletin directing dealers to remedy the noncompliance when the vehicles are brought in for service. NHTSA notes that a manufacturer's decision to conduct a service campaign is not a substitute for conducting a recall since consumers will neither be notified of the noncompliance nor informed to return to the dealership for a free remedy.

NHTSA's Decision: As indicated in the analysis of GM's petition provided above, NHTSA finds that GM has not demonstrated that the noncompliance of the subject vehicles with FMVSS No. 108 is inconsequential to motor vehicle safety. Accordingly, NHTSA hereby denies GM's petition and GM is consequently obligated to provide notification of, and a free remedy for, that noncompliance pursuant to 49 U.S.C. 30118 and 30120.

Authority: (49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

Joseph Kolly,

Acting Associate Administrator for Enforcement.

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